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Penulis	:	Iriyadi, Meiryani, Ahmad Syamil, Reyhan Rifqi Naldo, Zaidi Mat Daud, Anderes Gui, Agung Purnomo, Satria Fadil Persada

No.	Perihal	Tanggal
1.	Korespondensi Review Report 1 & 2	7 April 2023 & 28 Juni 2023
2.	Bukti Konfirmasi Artikel *Accepted*	26 September 2023
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1. Korespondensi Review Report 1 & 2
(7 April 2023 & 28 Juni 2023)

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To: Meiryani <meiryani@binus.edu>
Cc: Iriyadi Iriyadi <iriyadi@ibik.ac.id>

Dear Dr. Meiryani,
thank you for your email.
Please find attached the reviewer's report on the mentioned paper.

Kind regards,
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Senior Managing Editor, Managing Editor of the journals "Corporate Ownership and Control", "Journal of Governance and Regulation", "Risk Governance and Control: Financial Markets & Institutions", and "Corporate & Business Strategy Review"
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Review Report-1

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Reviewer's Report

Journal:	Corporate & Business Strategy Review		
Title of the paper:	**COMPARISON ANALYSIS OF THE CHASING RETURNS STRATEGY WITH THE BUY AND HOLD STRATEGY ON EQUITY FUNDS IN INDONESIA**		
Date of the Review completion:	07 April 2023		
Please choose options that can characterize the paper:			
Originality and importance of the paper to the field of research:	Low		
The **structure** of the paper:	Is hard to follow and understand		
Please tick relevant for the **abstract**	The abstract provides an accurate summary of the manuscript (including aim, methods, key results and relevance of the study)	☐ yes	☒ no
	The abstract contains unnecessary information (please explain)	☒yes	☐ no
	Is the abstract of appropriate size? (150-200 words)	☐ yes	☒ no
Please tick relevant for the **introduction**	Does the introduction identify the purpose of the paper or hypothesis and set the paper within the broader research perspective?	☐ yes	☒ no
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	Conclusions are supported by the findings, analysis and interpretations of the author(s)	☐ yes	☒ no
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	Are the number, relevance and "age" of the citations appropriate?	☐ yes	☒ no
Language of the paper:	Is low, majour revisions needed		
Length of the paper:	Is appropriate		
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This paper is a gathering of information and put with each other. Even the title needs to be clarified, and many mistakes in it. Also, the results are screenshots from the statistics program. More efforts should be invested into this paper except for gathering the data.

Review Report-2

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Date of the Review completion:	28 June 2023		
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Originality and importance of the paper to the field of research:	Adequate		
The **structure** of the paper:	Needs to be slightly corrected		
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Results and discussion:	Are the interpretations provided by the author(s) supported by the findings obtained in the study?	☒yes	☐ no
Are there any **figures or tables** that have to be corrected / deleted?	No, everything is fine		
	Are the figures and/or tables clear and you can understand their essence?	☒yes	☐ no
Conclusions:	Should be revised		
	Conclusions are supported by the findings, analysis and interpretations of the author(s)	☐ yes	☒ no
	Does the conclusion section repeat the abstract of the paper?	☐ yes	☒ no
References	Are all references in the list used in the paper?	☒yes	☐ no
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Language of the paper:	Is low, majour revisions needed		
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The abstract should be improvev, the grammar and the way of structuring is not well organised. The author is using future tense in the abstract.

The author is requested to add the implications of the study in the abstract section.

Some of the keywords do not making sense, look once again to them.

The first paragraph under introduction should make the reader aware about the study not directly about the story of Covid.

The way of formulating the hypotheses should be connected with literature review and empirical studies.

Mention clearly the used methodology with justification.

The article needs proofreading from A to Z.

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herewith it is certified that the paper titled *"ANALYSIS OF CHASING RETURNS STRATEGY IN EQUITY FUNDS"* co-authored by Iriyadi, Meiryani, Ahmad Syamil, and Reyhan Rifqi Naldo has been blind reviewed and accepted for publishing in the issue of the journal *Corporate & Business Strategy Review* (ISSN – 2708-9924 (printed version), ISSN – 2708-4965 (online version)) in 2024 (under the condition of English language proofreading).

Director, Virtus Interpress,
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3. Bukti Konfirmasi Artikel *Published*
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Consider the timely update of your professional profiles at your institutions and departments which you are affiliated to.

We are delighted that a successful collaboration has been established and we are looking forward to new scientific cooperation.

Best regards,
Olha

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Olha Lytvynenko
Senior Managing Editor, Managing Editor of the journals "Corporate Ownership and Control", "Journal of Governance and Regulation", "Risk Governance and Control: Financial Markets & Institutions", and "Corporate & Business Strategy Review"
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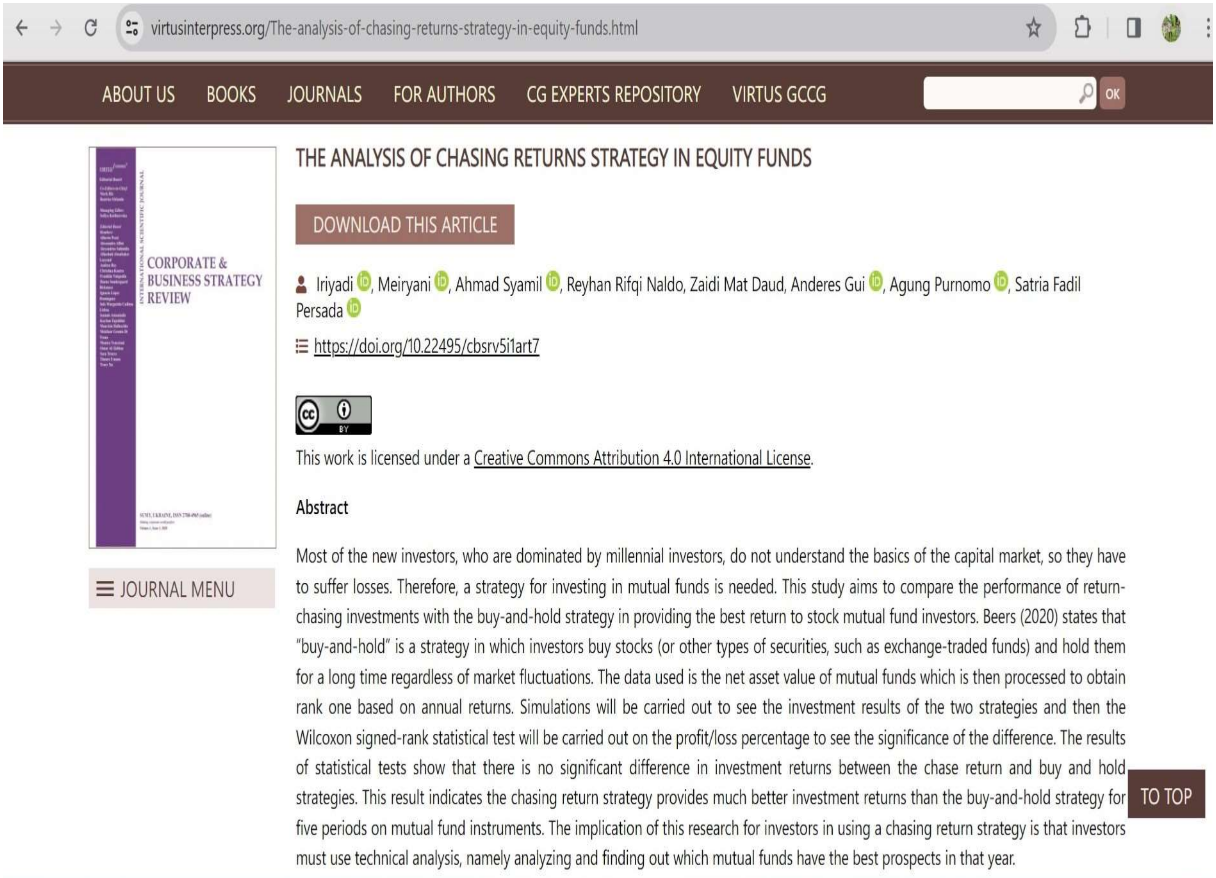

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Abstract

Most of the new investors, who are dominated by millennial investors, do not understand the basics of the capital market, so they have to suffer losses. Therefore, a strategy for investing in mutual funds is needed. This study aims to compare the performance of return-chasing investments with the buy-and-hold strategy in providing the best return to stock mutual fund investors. Beers (2020) states that "buy-and-hold" is a strategy in which investors buy stocks (or other types of securities, such as exchange-traded funds) and hold them for a long time regardless of market fluctuations. The data used is the net asset value of mutual funds which is then processed to obtain rank one based on annual returns. Simulations will be carried out to see the investment results of the two strategies and then the Wilcoxon signed-rank statistical test will be carried out on the profit/loss percentage to see the significance of the difference. The results of statistical tests show that there is no significant difference in investment returns between the chase return and buy and hold strategies. This result indicates the chasing return strategy provides much better investment returns than the buy-and-hold strategy for five periods on mutual fund instruments. The implication of this research for investors in using a chasing return strategy is that investors must use technical analysis, namely analyzing and finding out which mutual funds have the best prospects in that year.

TO TOP

THE ANALYSIS OF CHASING RETURNS STRATEGY IN EQUITY FUNDS

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Most of the new investors, who are dominated by millennial investors, do not understand the basics of the capital market, so they have to suffer losses. Therefore, a strategy for investing in mutual funds is needed. This study aims to compare the performance of return-chasing investments with the buy-and-hold strategy in providing the best return to stock mutual fund investors. Beers (2020) states that "buy-and-hold" is a strategy in which investors buy stocks (or other types of securities, such as exchange-traded funds) and hold them for a long time regardless of market fluctuations. The data used is the net asset value of mutual funds which is then processed to obtain rank one based on annual returns. Simulations will be carried out to see the investment results of the two strategies and then the Wilcoxon signed-rank statistical test will be carried out on the profit/loss percentage to see the significance of the difference. The results of statistical tests show that there is no significant difference in investment returns between the chase return and buy and hold strategies. This result indicates the chasing return strategy provides much better investment returns than the buy-and-hold strategy for five periods on mutual fund instruments. The implication of this research for investors in using a chasing return strategy is that investors must use technical analysis, namely analyzing and finding out which mutual funds have the best prospects in that year.

Keywords: Mutual Funds, Buy, Hold, Chasing Returns, Investment, Decision-Making

Authors' individual contribution: Conceptualization — I., M., and R.R.N.; Methodology — I., A.G., and A.P.; Investigation — I., M., and Z.M.D.; Resources — M.; Writing — Original Draft — A.P.; Writing — Review & Editing — M., A.S., and S.F.P.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

Mutual fund investment products are perfect for investors who have many limitations, such as limited time, limited funds, limited information, and limited investment knowledge. In addition, this instrument is also able to reduce investment risk because it is distributed across various investment products. But that does not mean mutual funds are risk-free. For this reason, investors still need to study the various risks of this product. It seems that the rapid development of the mutual fund industry cannot be separated from the characteristics of this product, which is unique and very suitable for investors who have many limitations. Apart from that, mutual fund products are also said to be investment products that are most in line with the adage in the investment world, namely "Do not put all eggs in one basket". The point is that to reduce risk, we need to spread out investment placements so that we avoid the risk of total loss.

The director of the World Health Organization (WHO) announced to the mass media that COVID-19 was categorized as a pandemic. At that time, there were more than 118,000 cases in 114 countries, and 4,291 people had lost their lives (WHO, 2020). In Indonesia itself, the first case of death due to COVID-19 occurred in March 2020, after which new victims emerged; both positive for COVID-19, as well as patients under surveillance and people under surveillance (Mukti, 2021). Initially, this incident did not affect the Indonesian stock market or the Jakarta Composite Index (JCI), but as more and more victims were confirmed, the stock market reacted negatively, causing the stock market price to drop drastically (Fan & Lin, 2020). More precisely, on March 24, 2020, with the announcement of the WHO and the increasing number of victims of COVID-19 in Indonesia, the JCI experienced a fairly deep decline of -36.88% year to date (YTD), bringing the JCI position back to what it was in 2013, at a position of around Rp. 3900 (Kutra et al., 2019).

This incident made the condition of the Indonesian stock market covered by many local media. Social media also took part in covering the phenomenon of the stock market decline during the pandemic. This is what introduced the Indonesian people to the capital market and its investment instruments. In 2020 alone, capital market investors experienced a 56.21% growth in the number of Single Investor Identification (SID) compared to 2019 and grew again by 57.20% in August 2021 compared to 2020, a very significant increase if we compared to previous years, in August 2021 the number of SID capital market investors in Indonesia stood at 6,100,525 people (Kustodian Sentral Efek Indonesia [KSEI], 2021). The surprising thing from this data is that as of August 2021, the number of capital market investors in Indonesia is dominated by the millennial generation, which is 58.82% of capital market investors under 30 years old, twice as many investors aged 31–40 years old, which is 21.64%, and much more than those aged between 41–50 years old which are only 10.80% (KSEI, 2021). The phenomenon of the increase in the number of millennial investors is also influenced by the emergence of figures called influencers on social media who encourage Indonesians to invest (Sudrajat, 2021). However, based on the observations of the Founder and Co-Founder of the Indonesian Accountants Association (IAI), most new investors who are dominated by millennial investors or coronavirus investors do not understand the basics of the capital market until they have to bear losses (Alphani, 2022). This loss is most likely to occur because most millennial investors only rely on social media as their source of information and do not conduct in-depth analysis related to the instrument they want to invest in, so they only choose well-known stocks and choose stocks based on certain moments (Sudrajat, 2021). Changing market conditions sometimes make investors wonder when is the right time to buy investment instruments and what strategies can be used to reduce the risk of loss. In addition, there is no standard guide on when is the right time to enter the market, so an investment strategy is needed to get optimal results (Hidajat, 2015).

Mutual fund investment instruments were chosen in this study because many millennials tend to choose to invest through mutual funds (Malik, 2021). This is also evidenced from data processed by Bareksa (2020), digital mutual fund marketplace, that the growth of mutual fund investors is dominated by the millennial segment (Malik, 2021). Another factor in the selection of instruments in this study is that if we look back at the SID growth data provided by KSEI (2021), the number of mutual fund investors showed the highest increase compared to the SID of other types of instruments, the number of SIDs of mutual fund investors increased by 71.57% in August 2021 when compared to the previous year, where for Government Securities instruments only experienced an increase of 21.36%, 57.20% for the capital market, and 59.21% for C-BEST instruments in the same period. This study focuses on the type of equity mutual funds, after all, this type of mutual fund is the most volatile mutual fund among other types of mutual funds because the majority (80%) of funds are invested in stock instruments by investment managers, so an adequate and appropriate investment strategy is needed. Of the many mutual fund investment strategies, the investment strategies that will be compared in this study are the chasing returns strategy and the buy-and-hold strategy.

The chasing returns strategy was chosen because of the general tendency of investors to pursue returns from previous winners, this strategy has also received considerable attention in the world of economics and finance (Alti et al., 2012). Grinblatt et al. (1995) stated that institutional investors also use a strategy similar to chasing returns, namely the trend-based trading strategy, where institutional investors buy the winning shares in the previous period. The buy-and-hold strategy itself was chosen because many financial experts say that the buy-and-hold strategy is the best investment strategy (Ling et al., 2014). This strategy has become synonymous with a conservative and reasonable approach to retirement savings, where investors choose their investments early and give time for these investments to grow or compound (Sanderson & Lumpkin-Sowers, 2018). The nature of the chasing returns strategy which is classified as aggressive because it always changes the composition of its investment portfolio, will be interesting when compared to the buy-and-hold strategy, this is a very passive strategy and uses a conservative approach.

This study aims to compare the performance of the chasing returns investment strategy with the buy-and-hold strategy in providing the best returns to investors in equity mutual fund investment instruments. The results of this study are expected to help millennial investors or investors in general in choosing a strategy for an investment instrument, more precisely the stock mutual fund instrument. This research is also expected to be able to contribute to or benefit investors' decision-making, especially for those who are new to the world of capital markets, in considering the strategy of investing in equity funds.

Based on the background described above, the research questions raised in this study are:

RQ1: How does the performance of stock mutual funds use the investment strategies of chasing returns and buy-and-hold?

RQ2: Is there a significant difference in investment returns between the chasing returns strategy and the buy-and-hold strategy?

The remaining structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology that has been used to conduct empirical testing. Section 4 provides the results and Section 5 presents a discussion of the research. Section 6 comprises a conclusion, as well as suggestions, and recommendations for future research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Efficient market hypothesis

The efficient market hypothesis is a theory put forward by Malkiel and Fama (1970). According to the efficient market concept, the market is said to be efficient if the prices formed in the market are a reflection of the information that is already available so that it can be said that no one, both individual investors and institutional investors, will be able to obtain abnormal returns after adjusting for risk and by using existing trading strategies. This can happen because the prices formed in the market are a reflection of existing information or in another language, stock prices reflect all available information (Gumanti & Utami, 2002). According to Malkiel and Fama (1970), there are three forms of market efficiency levels, namely the weak-form efficient market, the semi-strong form of an efficient market, and the strong form of an efficient market. This is closely related to the extent to which information absorption can occur in the market. In this case, Haugen (2001) divides the absorption of the information into three groups, namely past stock price information, all public information, and all information including inside or private information. According to Gumanti and Utami (2002), three forms of market efficiency are defined as follows:

1. *Weak form:* In this form, the stock price is assumed to reflect all information that occurred in the past or the historical price of a stock. This means that the price formed on a stock is a direct reflection of the movement of the price of the stock in question in the past.

2. *Semi-strong form:* In addition to the absorption of historical stock price reflections, the semi-strong form also shapes stock prices from the absorption of public information in the market, including financial reports and additional (complementary) information as required by accounting regulations. Publicly available information can also be in the form of other financial regulations, such as property taxes or interest rates and/or stock betas including company ratings.

3. *Strong form:* The strong form of an efficient market states that prices that occur reflect all available information, both historical price information, public information, and private information that is only known by a few parties, such as company management, and the board of directors, directors and creditors.

2.2. Mutual funds

According to the Indonesia Stock Exchange (IDX) web page (https://www.idx.co.id/), mutual funds are an alternative investment for the investor community, especially small investors and investors who do not have much time and expertise to calculate the risk of their investment. Mutual funds are designed as a means to raise funds from people who have capital, have the desire to invest, but only have limited time and knowledge. There is another definition, which refers to the Capital Market Law No. 8 of 1995, Article 1 paragraph 27 that mutual funds are a forum used to collect funds from the investor community to be further invested in securities portfolios by investment managers. There are three things related to this definition. First, the existence of funds from the investor community. Second, the fund is invested in a portfolio of securities. Third, the fund is managed by an investment manager. Thus, the funds in the mutual fund are mutual funds of the investors, while the investment manager is the party that is trusted to manage the funds (Otoritas Jasa Keuangan [OJK], n.d.). According to Reilly and Brown (2000), mutual funds are institutions that collect money from investors and then invest it in securities, such as stocks, bonds, and other money market instruments. Meanwhile, according to Rudiyanto (2019), mutual funds are products from companies that are included in the capital market category that are supervised by the OJK so that they can carry out fund-raising activities from the public. Through mutual fund investment products, investors no longer need to worry about managing their investment portfolios, because they are already managed by investment managers.

Understanding the types of mutual funds is very important for potential investors because each type of mutual fund has different characteristics, returns, and levels of risk (Masruroh, 2014). Quoted from the website of the Financial Services Authority (in Indonesian, "*Otoritas Jasa Keuangan*"), mutual funds are divided into four categories (OJK, n.d.), namely:

1. *Money market funds:* This type of mutual fund only invests in debt securities with maturities of less than 1 year. The aim is to maintain liquidity and maintain capital.

2. *Fixed income funds:* This type of mutual fund invests at least 80% of its assets in the form of debt securities. These mutual funds carry relatively greater risk than money market mutual funds. The goal is to generate a stable rate of return.

3. *Equity funds:* Mutual funds that invest at least 80% of their assets in the form of equity securities. Because the investment is in stocks, the risk is higher than the previous two types of mutual funds but yields a high rate of return.

4. *Discretionary funds:* This type of mutual fund invests in equity securities and debt securities.

Following are the differences in implementing active and passive portfolio strategies (Handini & Astawinetu, 2020):

1. *Active portfolio strategy:* In this strategy, investors will try to get the highest return. Thus, investors will always look for ways to get more profits higher than the costs to be borne. Indirectly, needed extensive knowledge and expertise in analyzing influencing information portfolio securities performance;

2. *Passive portfolio strategy:* In this strategy, investors will not take stock trading actions that give abnormal returns. Investors tend to try to follow the market in a way that market index performance replication. The strategies used in the passive portfolio strategy include the buy-and-hold strategy and index replication strategy.

2.3. Active investment strategy

Passive investment can outperform an active investment in terms of transaction costs because passive investment does not need to make buying/selling transactions as often as investing using an active approach. Investors can choose investment assets that will then be held through the ups and downs of the market and will only be sold when their investment goals have arrived at the right time, for example, a pension fund (Lorencia & Taufiq, 2020). The chasing returns strategy referred to in this study is taken from a term coined by Rudiyanto (2019), this name was taken because investors generally pursue mutual funds (or other investment instruments) that had good returns in the previous period. The term "chasing returns" has various different names but has the same meaning, namely choosing the winner in the previous period. According to Dahl (2021), making investment decisions based on asset performance that occurred recently is called "performance chasing". Meanwhile, according to Alti et al. (2012), the strategy of buying (selling) financial assets based on the condition of assets that have high (low) returns in the previous period is called the "chasing returns strategy". The chasing returns strategy belongs to an active investment strategy where using this strategy requires a direct approach or analysis, usually by a portfolio manager or by someone called an active participant (The Investopedia Team, 2021). According to Sitohang (2017), buy and hold means buying and holding the mutual fund (or other investment instrument) for a long period of time in the hope that the price of the mutual fund will increase rapidly in a few years. Meanwhile, according to Beers (2020), buy and hold is a strategy where investors buy shares (or other types of securities such as exchange-traded funds (ETFs) and hold them for a long time regardless of market fluctuations, so an investor who uses a buy and hold strategy actively chooses investments but does not pay attention to short-term price movements and technical indicators. The buy-and-hold strategy is classified as a passive investment strategy, where the passive strategy describes portfolio decisions that avoid direct or indirect investment asset analysis (Bodie et al., 2001).

2.4. Hypotheses development

According to Diat Prasojo (2018), "Strategy are ideas and actions to understand and secure the future" (p. 3). Meanwhile, according to Filbert and Prasetya (2019), "Investment is an attempt to make our money grow" (p. 22). So, an investment strategy is basically a plan to invest money in various types of investments that will help achieve financial goals within a certain amount of time. Triton (2014) states that individual companies allow all assets, profits earned, and various consequences for the existence of this business organization to be personal rights and responsibilities of the owner, so this has implications not only for profitable things, such as profits but "all company debts are also the responsibility of the owner, as are business risks" (p. 56). There are several previous studies that discuss the comparison between several investment strategies on various investment instruments.

According to CNN Indonesia (2021), ETFs are mutual funds that are traded on the stock exchange. According to Kutra et al. (2019), ETFs are mutual funds that are traded on stock exchanges like stocks. Moore (2020) compared the buy-and-hold strategy and entrance timing as a strategy to enter the market during a bull market. The purpose of this quantitative comparative study is to test whether there is a significant difference when comparing the monthly returns of the ETF SPY (S&P 500 index ETF) in the bull market between the entrance timing and buy-and-hold strategies. The results of this study indicate that the buy-and-hold strategy shows very good performance when compared to the entrance timing strategy, where the buy-and-hold strategy produces an average return of 148.63 with a standard deviation of 78, and the entrance timing strategy produces an average return of 46.67 with a standard a deviation of 24.05 for a 1% daily drop, and an average return of 65.29 with a standard deviation of 24.88 for a 3% daily drop.

Hidajat (2015) compares the lump-sum (LS) strategy with the dollar-cost averaging (DCA) strategy of the Panin Dana Maksima equity mutual fund, the data is taken from January 2011 to August 2013. To examine the differences between the LS strategy and DCA, statistical analysis was carried out, namely the Wilcoxon signed-rank test. The results of this study indicate that the LS strategy gives generally better results than the DCA strategy on the Panin Dana Maksima stock mutual fund. However, the results of statistical analysis show that there is no difference between the investment returns of LS and DCA. Cohen and Cabiri (2015) compared returns from the traditional buy-and-hold strategies with well-known technical oscillators applied to various indices leading global markets (DJI, FTSE, NK225, and TA100) over the period 2007–2012. The purpose of this study was to see whether technical oscillators can consistently achieve returns that exceed buy-and-hold strategy across various global financial market indices. The results of this study indicated that during a bear market, the Relative Strength Index (RSI) and moving average convergence divergence (MACD) technical oscillators generally generate better returns than the buy-and-hold strategy used on global indices, whereas the opposite occurs during a bull market.

Hilliard and Hilliard (2018) compare returns from investment portfolios using a rebalancing strategy with a buy-and-hold strategy. The theoretical properties are derived using Jensen's inequality and Hölder's defect formula. The contents of the portfolio consist of the Center for Research in Security Prices (CRSP) Value Weighted Market Index and US Treasury Bills. The results of this study indicate that although rebalancing can reduce volatility, the results of this test largely support the buy-and-hold strategy because of the relatively high returns on the index when dealing directly with US Treasury Bills.

Panyagometh and Soonsap (2012) compared returns from long-term equity funds (LTF) in Thailand using the MACD technical strategy, a popular averaging strategy, namely DCA, and investment strategy lump-sum. The results of this study indicate that the MACD strategy outperforms the other two strategies when measured using dominance frequency. If investment effectiveness is measured from the mean terminal value, the LS investment strategy at the beginning of the year is found to be able to produce the highest mean terminal value, while the LS investment strategy at the end of the year will be found to generate the highest returns compared to the risk as measured by the Sharpe ratio. However, when analyzed statistically, there was no significant difference between the strategies used. From the description above, the researchers formulated the following hypotheses:

H_0 (null hypothesis): There is no statistically significant difference in stock mutual fund investment returns between chasing returns and buy-and-hold strategies.

H1 (alternative hypothesis): There is a statistically significant difference in stock mutual fund investment returns between chasing returns and buy-and-hold strategies.

3. RESEARCH METHODOLOGY

3.1. Object and data sources

This research is quantitative research using secondary data from OJK website (https://reksadana.ojk.go.id/). The data collection method used is indirect, namely in the form of data that has been collected by other parties and published to the public, this happens because the data taken in this study uses a lot of secondary data (Setiawan, 2017). The variable that will be examined in this study is the *Return of stock mutual funds*. The data used is stock mutual fund Rank I data based on returns from 2016 to 2021. Data on assets under management (AUM) and participation unit (UP) for equity mutual funds from 2016 to 2021 were obtained from the same website, which was then processed by the authors to obtain net asset value (NAV) and get Rank I based on return every year.

Table 1. Performance of equity mutual funds (2016–2021)

Year	*Period*	*Equity funds Rank I*	*Returns (%)*
2016	-	Treasure Fund Super Maxxi*	50.86
2017	1	Cipta Ovo Ekuitas**	44.79
2018	2	Shinhan Equity Growth	34.88
2019	3	Cipta Saham Unggulan	103.25
2020	4	Pool Advista Kapital Syariah	46.01
2021	5	-	-

*Note: * Rank I in 2016 based on the processed data is the Gap Value Fund Equity Fund, but it has an abnormal return, which is 567.20%. Thus, it was replaced with Treasure Fund Super Maxxi which won Rank II; ** Rank I in 2017 based on the data processed is the Pacific Shares Syariah II Mutual Fund, but it has an abnormal return, which is 392.90%. Thus, it was replaced with Cipta Ovo Ekuitas which won Rank II.*

Source: OJK (https://reksadana.ojk.go.id/), processed by the researchers.

Equity fund Rank I cannot be used as an investment choice for the same year because the information will only be used by investors in the following year. The data for 2016 is not considered as period 1 or the initial period because the information on the winner of the Rank I equity mutual fund in that year is only used to reference the selection of stock mutual funds in the next period, namely period 1 or 2017. For period 5, there is no name and Rank I stock mutual fund returns because in this period it is only used to see the final results of the equity mutual fund investment performance using chasing returns and buy-and-hold strategies which will then be compared. Alternative methods that would be suitable for conducting this research is ordinary least squares and simultaneous quantile regression models for empirical investigation.

3.2. Investment simulation

For the chasing returns strategy, the initial capital to be invested is Rp. 10,000,000 at the beginning of the investment period or in period 1, more precisely, in 2017. The stock mutual funds that will be selected in period 1 are stock mutual funds that are ranked I based on returns in the previous year or 2016, the stock mutual fund is the Treasure Fund Super Maxxi stock mutual fund, which has a return of 50.86% in 2016. In the next period, or period 2, (in 2018), the stock mutual fund that will be selected in the chasing returns strategy are equity mutual funds that are ranked I based on returns in 2017, namely the Cipta Ovo Ekuitas stock mutual fund with a return of 44.79%. Therefore, the mutual fund that has been selected in period 1, namely Treasure Fund Super Maxxi will be sold and replaced by the Cipta Ovo Ekuitas equity fund. Likewise, for the next period up to period 5 in 2021, the stock mutual funds that will be selected are the winning stock mutual funds in the previous year based on returns. Overall, the stock mutual funds selected for each investment period in the chasing returns strategy are as follows:

- period 1 = Treasure Fund Super Maxxi;
- period 2 = Cipta Ovo Ekuitas;
- period 3 = Shinhan Equity Growth;
- period 4 = Cipta Saham Unggulan;
- period 5 = Pool Advista Kapital Syariah.

For the buy-and-hold strategy, the initial capital to be invested is Rp. 10,000,000 at the beginning of the investment period, or period 1, to be precise, in 2017. Unlike the chasing returns strategy, which always changes its investment portfolio, the buy-and-hold strategy only needs to do an investment analysis once. namely at the beginning of the period, or in 2017, so that there is only one equity mutual fund that will be purchased in this strategy, namely the winner of the previous year or 2016 stock mutual fund. The stock mutual fund chosen in this strategy is the Treasure Fund Super Maxxi stock mutual fund which produced a return of 50.86% in 2016. Overall, the stock mutual funds selected for each investment period in the buy-and-hold strategy are as follows:

- period 1 = Treasure Fund Super Maxxi;
- period 2 = Treasure Fund Super Maxxi;
- period 3 = Treasure Fund Super Maxxi;
- period 4 = Treasure Fund Super Maxxi;
- period 5 = Treasure Fund Super Maxxi.

The two strategies above only get capital once at the beginning of the investment period, which is Rp. 10,000,000, there will be no top-up or further purchases in the next period by the two stock mutual funds chasing returns and buy-and-hold investment strategies. In this study, it is assumed that all the selected equity mutual funds will not distribute dividends. Every purchase (subscription) or sale (redemption) transaction made will be subject to a subscription fee and a selling fee (redemption fee). The amount of the buying fee and selling fee for this study is 1% of the transaction value, so the total investment value when buying or selling mutual funds will be obtained from the following formula:

$$Investment\ value\ =\ Buying\ or\ selling\ value\ \times\ (1\ -\ 0{,}01) \tag{1}$$

3.3. Statistic test

In addition to investment simulations, another thing that can be done to test the difference in the investment performance of equity funds between the chasing returns and the buy-and-hold strategies is to carry out statistical tests such as that carried out by Hidajat (2015) using the Wilcoxon signed-rank test on the percentage gain/loss. Because the sample size is small (lower than 30) and the type of population distribution is unknown, a non-parametric test method is used to compare the differences in the characteristics of interest of two paired populations (Panyagometh & Soonsap, 2012).

4. RESULTS

4.1. Investment results

4.1.1. Chasing returns strategy

The following is the performance of selected stocks for the chasing returns strategy selected based on the previous year's winners:

Table 2. Performance of preferred equity mutual funds for chasing returns strategy (2017–2021)

Year	*Period*	*Equity funds Rank I*	*Return (%)*
2017	1	Treasure Fund Super Maxxi	6.64
2018	2	Cipta Ovo Ekuitas	1.22
2019	3	Shinhan Equity Growth	2.34
2020	4	Cipta Saham Unggulan	21.46
2021	5	Pool Advista Kapital Syariah	-11.29

Source: OJK (https://reksadana.ojk.go.id/), processed by the researchers.

The investment returns from the chasing returns strategy in stock mutual funds for the periods 1–5 gave positive results overall. From periods 1–4, the mutual funds selected based on the winners in the previous year consistently produced positive returns. Meanwhile, during the five observation periods, there was only one that gave a negative return, namely period 5 (in 2021). Overall, the chasing returns strategy incurs buying fees five times in five periods to buy five different equity mutual funds and issues selling fees four times in four periods to replace old stock mutual funds with previously winning stock mutual funds.

Table 3. Investment results for chasing returns strategy

Period	*Investment beginning value period*	*Investment value — Selling fee (1%)*	*Investment value — Buying fee (1%)*	*Returns*	*Returns cumulative*
1	Rp. 10.000.000	-	Rp. 9.900.000	Rp. 657.046	Rp. 10.557.046
2	Rp. 10.557.046	Rp. 10.451.475	Rp. 10.346.961	Rp. 126.737	Rp. 10.473.697
3	Rp. 10.473.697	Rp. 10.368.960	Rp. 10.265.271	Rp. 240.290	Rp. 10.505.561
4	Rp. 10.505.561	Rp. 10.400.505	Rp. 10.296.500	Rp. 2.209.298	Rp. 12.505.798
5	Rp. 12.505.798	Rp. 12.380.740	Rp. 12.256.932	-Rp. 1.384.279	Rp. 10.872.654

4.1.2. Buy-and-hold strategy

The following is the performance of selected stocks for the buy-and-hold strategy which was chosen based on the winners of the stock mutual funds before period 1 (in 2016) (Table 4).

The investment returns from the buy-and-hold strategy in stock mutual funds for periods 1–5 gave an overall negative result. Periods 2 and 3 produced negative returns, whereas for period 3 the losses experienced quite deep, up to more than 50%. For period 5, the Treasure Fund Super Maxxi stock mutual fund experienced a significant increase of 73.79%, but even though it produced a high return in period 5, it still could not reverse the loss position experienced in periods 2 and 3.

Table 4. Performance of preferred equity mutual funds for the buy-and-hold strategy (2017–2021)

Year	*Period*	*Equity funds Rank I*	*Return (%)*
2017	1	Treasure Fund Super Maxxi	6.64
2018	2	Treasure Fund Super Maxxi	-2.36
2019	3	Treasure Fund Super Maxxi	-68.44
2020	4	Treasure Fund Super Maxxi	6.91
2021	5	Treasure Fund Super Maxxi	73.79

Source: OJK (https://reksadana.ojk.go.id/), processed by the researchers.

Overall, the buy-and-hold strategy issues a purchase fee only one time for five periods, this purchase fee is used to buy one stock mutual fund at the beginning of the period. The buy-and-hold strategy does not issue a selling fee at all for five periods.

Table 5. Investment results for buy-and-hold strategy

Period	*Investment beginning value period*	*Investment value — Buying fee (1%)*	*Returns*	*Returns cumulative*
1	Rp. 10.000.000	Rp. 9.900.000	Rp. 657.046	Rp. 10.557.046
2	Rp. 10.557.046	-	-Rp. 249.554	Rp. 10.307.492
3	Rp. 10.307.492	-	-Rp. 7.054.129	Rp. 3.253.364
4	Rp. 3.253.364	-	Rp. 224.683	Rp. 3.478.046
5	Rp. 3.478.046	-	Rp. 2.566.411	Rp. 6.044.458

4.2. Comparison of investment strategy performance on chasing returns and buy-and-hold

The results of investing in equity funds using both chasing returns and buy-and-hold strategies produce many different returns, here is a comparison of investment returns, gains/losses, and the percentage of returns:

Table 6. Comparison of investment return, gain/loss, and percentage of gain/loss chasing returns and buy-and-hold

Period	*Investment result*		*Gain/Loss*		*Percentage gain/Loss*	
	Chasing returns	*Buy-and-hold*	*Chasing returns*	*Buy-and-hold*	*Chasing returns*	*Buy-and-hold*
1	Rp. 10.557.046	Rp. 10.557.046	Rp. 657.046	Rp. 657.046	5.57%	5.57%
2	Rp. 10.473.697	Rp. 10.307.492	Rp. 126.737	-Rp. 249.554	-0.79%	-2.36%
3	Rp. 10.505.561	Rp. 3.253.364	Rp. 240.290	-Rp. 7.054.129	0.30%	-68.44%
4	Rp. 12.505.798	Rp. 3.478.046	Rp. 2.209.298	Rp. 224.683	19.04%	6.91%
5	Rp. 10.872.654	Rp. 6.044.458	-Rp. 1.384.279	Rp. 2.566.411	-13.06%	73.79%

Figure 1. Comparison of investment chasing returns and buy-and-hold

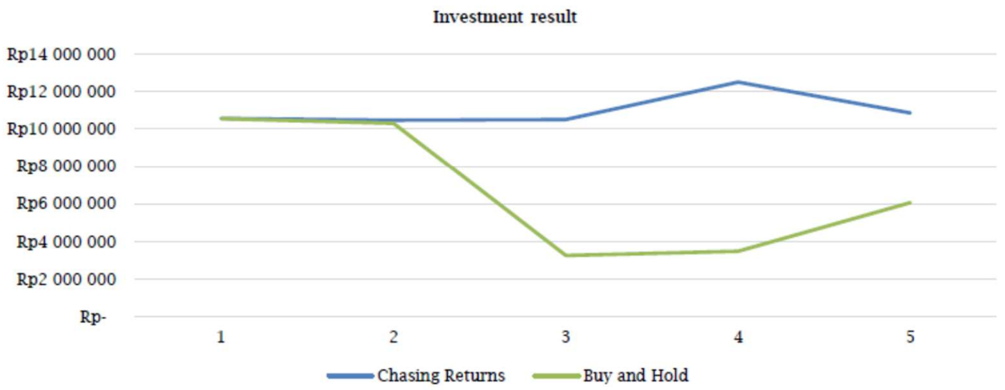

Figure 2. Comparison of gain/loss, chasing returns, and buy-and-hold

The results of the analysis above show that the chasing returns strategy produces better returns than the buy-and-hold strategy. The final investment yield generated by the chasing returns strategy is Rp. 10,872,654, while for the buy-and-hold strategy it is Rp. 6,044,458. The buy-and-hold strategy suffered a fairly large loss in period 3, the loss was -Rp. 7,054,129, while the biggest loss for the chasing returns strategy was only -Rp. 1,384,279, a very small amount when compared to the loss in the buy-and-hold strategy. However, when viewed from the highest profit, the buy-and-hold strategy has the highest profit of Rp. 2,566,411, higher than the chasing returns strategy which is only Rp. 2,209,298. Apart from being seen from the final investment results, gain/loss, and percentage gain/loss, other things that can be compared are the total buying fee and selling fee of the two stock mutual fund strategies, chasing returns and buy-and-hold, because this is one of the aspects that play a role important to the return of stock mutual funds. The following is a comparison of the total purchase fee and selling fee of the two stock mutual fund strategies: chasing returns and buy-and-hold.

Table 7. Comparison of total buying fee and selling fee

Period	*Chasing returns*			*Buy-and-hold*		
	Selling fee	*Buying fee*	*Cumulative*	*Selling fee*	*Buying fee*	*Cumulative*
1	-	Rp. 100.000	Rp. 100.000	-	Rp. 100.000	Rp. 100.000
2	Rp. 105.570	Rp. 104.515	Rp. 310.085	-	-	Rp. 100.000
3	Rp. 104.737	Rp. 103.690	Rp. 518.512	-	-	Rp. 100.000
4	Rp. 105.056	Rp. 104.005	Rp. 727.572	-	-	Rp. 100.000
5	Rp. 125.058	Rp. 123.807	Rp. 976.438	-	-	Rp. 100.000

Figure 3. Comparison of total buying fee and selling fee

The chasing returns strategy spends a very large amount only for fees (selling and buying), which is Rp. 976,438, this amount is even greater than the total profit obtained from the investment returns of chasing returns, which is Rp. 872,654 (Rp. 10,872,654 - Rp. 10,000.000). Meanwhile, the buy-and-hold fee only issues a one-time fee for five periods, this fee is used to buy stock mutual funds at the beginning of the period, the nominal amount is much smaller when compared to the chasing returns fee, which is Rp. 100,000.

4.3. Statistical test

Statistical testing of the difference between the chasing returns and buy-and-hold strategies using the Wilcoxon signed-rank test was conducted on the gain/loss percentage of the two strategies. This test is similar to the parametric paired sample t-test, which uses the assumption that the data distribution is normal or close to normal, while the Wilcoxon test is used when the assumption of normality is not met (Hidajat, 2015). Statistical test results using the Wilcoxon signed-rank test can be seen in Table 8.

Table 8. Wilcoxon signed-rank test

Sign	*Obs.*	*Sum of ranks*	*Expected*
Positive	3	9	7
Negative	1	5	7
Zero	1	1	1
All	5	15	15

Unadjusted variances	13.75
Adjustment for ties	0.00
Adjustment for zeroes	-0.25
Adjusted variance	13.50
H_0: Chasing returns = Buy-and-hold	
Z = 0.544	
Prob. > |z| = 0.5862	

By using a level of significance of 0.05 and a two-tailed test, the z-values are -1.96 and +1.96. From the calculation results, it is obtained that the calculated z-value is 0.544, which means it is in the H_0 acceptance area. Thus, it can be concluded that there is no significant difference between the chasing returns strategy and the buy-and-hold strategy statistically on equity mutual fund investment instruments.

5. DISCUSSION

If we look at the results of statistical tests alone, investors can choose between the chasing returns strategy or the buy-and-hold strategy and will get returns that are more or less the same or not much different. This is in line with the efficient market hypothesis, the weak-form theory proposed by Malkiel and Fama (1970), which states that no one, both individual investors and institutional investors, will be able to obtain abnormal returns which in weak form, the historical price of an investment instrument has been reflected in the current price (priced-in). The results of statistical tests in this study are also in line with the findings of Hidajat (2015), which shows that indeed the results of the statistical analysis do not show any difference between the investment returns between the lump-sum strategy and the DCA. Panyagometh and Soonsap (2012) also stated that among the three strategies analyzed (lump-sum, DCA, and value averaging), the statistical test results show that there is no significant difference between the three investment strategies.

However, when viewed from investment returns, gain/loss, and percentage gain/loss, the chasing returns strategy is superior. The chasing returns strategy can even generate positive returns, which is Rp. 872,654 or 8.73%, whereas the buy-and-hold strategy produces negative returns, which is -Rp. 3,955,542 or -39.56%. There is a huge difference between the two strategies. From the results based on this investment simulation, it can be concluded that the strategy that is superior to the equity mutual fund investment instrument is the chasing returns strategy. The results based on this simulation indicate that the capital market is still not efficient, because investors can still get returns from a strategy that analyzes the historical price of an investment instrument. The absorption of information based on historical prices is the foundation of the efficient market hypothesis to say that the market is weakly efficient (weak form). The results of this simulation contradict the research conducted by Moore (2020) stating that the buy-and-hold strategy shows very good performance when compared to the strategy that uses timing, namely entrance timing. Apart from investment returns, another aspect that needs to be considered in comparing the two chasing returns and buy-and-hold strategies is the fee aspect. Although the chasing returns strategy produces a much better performance than the buy-and-hold strategy, the chasing returns strategy must cost a very large fee, even greater than the returns generated by this strategy itself, which is Rp. 976,438.

6. CONCLUSION

The results of this study indicate that the chasing returns strategy provides much better investment returns than the buy-and-hold strategy for five periods on equity mutual fund investment instruments. Although the chasing returns strategy gives generally better results than the buy-and-hold strategy, the statistical test results show that there is no significant difference in investment returns between the chasing returns and buy-and-hold strategies. Future researchers can measure the performance of equity funds using other methods with a longer research year. Apart from that, further researchers can also compare the performance of mutual funds that have similar underlying such as Sharia mutual funds and fixed income mutual funds, and so on. This study shows that statistically, there is no significant difference in investment returns between the chasing returns and buy-and-hold investment strategies, but if you look at the simulation results, the chasing returns strategy is superior. This, of course, can be used as a new consideration and input for investors in determining a strategy to invest in equity mutual funds. The results of this study still contain some weaknesses and limitations so further research needs to be carried out by taking into account:

1. Added investment strategy testing for several other types of mutual funds.
2. An increase in the observation period. The observation period needs to be reduced again to several semesters or quarters, this needs to be done so that the results obtained can better reflect the actual situation.
3. The observation period should be divided into when the stock market is bullish, bearish, and sideways. This needs to be done so that the conclusions obtained can be more accurate.

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However, for to 12 years Indonesia has not been able to achieve its tax target (Sembiring, 2021). Tax revenue has been below the target set since 2009. In December 2020, the tax revenue only reached IDR1,069.98 trillion or 89.25% of the target set at IDR1,198.8 trillion in Presidential Regulation No. 72/2020. One of the factors causing the non-achievement of the tax target is the practice of tax avoidance by taxpayers. The failure to achieve this tax revenue target was also conveyed by Tax Justice Network (2020) through the report entitled "The State of Tax Justice 2020: Tax Justice in the Time of COVID-19". The report stated that Indonesia was estimated to lose up to IDR68.7 trillion per year due to tax evasion. From this amount, as much as IDR67.6 trillion was the result of corporate tax avoidance in Indonesia and the remaining IDR1.1 trillion came from individual taxpayers. It was reported by Yoliawan (2019) that the Ministry of Finance noted that tax revenues throughout January 2019 grew 8.82% or increased from IDR79 trillion to IDR86 trillion. Although revenue still grew positively, the manufacturing or manufacturing sector received negative growth. In fact, this sector contributes 20.8% to tax revenue. Manufacturing sector revenue is recorded at IDR16.77 trillion, down 16.2% year on top of the year. This, of course, has an existing impact on top of tax revenue, where the low/decreased tax revenue is suspected due to tax avoidance practices.

In June 2019, the Global Partnership for Financial Inclusion (GPFI, 2019) forum was held, which resulted in the Organization of Economic Co-operation and Development (OECD) and G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS). The framework contains a collaborative implementation of 15 steps to overcome tax avoidance, improve the coherence of international tax regulations, and ensure a tax environment that is more transparent (GPFI, 2019). During the same time that an existing implementation of the tax action steps happened to be discussed at the forum, the government of Indonesia made the Omnibus Law. However, before the Omnibus Law took effect, the COVID-19 outbreak, which turned into an existing pandemic, as well as caused economic growth to contract made, President Joko Widodo took steps to deal with the pandemic while restoring the economy by providing tax incentives by announcing adjustments to the corporate income tax rate.

In 2020, the government released Government Regulation No. 30 of 2020 which states that the corporate income tax, which was initially subject to a 25% rate, will be reduced to 22% for 2020 and 2021. This regulation was issued in the context of handling the COVID-19 pandemic and as an effort by the government to deal with the COVID-19 pandemic, which is a threat that endangers the national economy, considering that the Indonesian economic sector has been significantly affected by this pandemic. This policy is one of the government's efforts from a fiscal perspective to stimulate the domestic economic industry, namely by reducing the corporate tax rate (Kompas.com, 2021). However, this reduction in tax rates does not mean that companies will reduce their practice of reducing the tax burden they bear, in fact, this reduction in corporate tax rates can stimulate tax avoidance practices.

Tax avoidance belongs to the active tax resistance actions that have the ability to exist as taken by taxpayers to reduce their tax burden legally, where this happens to be done by taking advantage that belongs to loopholes inside of the applicable tax regulations. The COVID-19 pandemic has caused many business entities to experience an existing significant decrease in income, therefore, the possibility that belongs to tax avoidance practices happens to be significantly getting higher (Barid & Wulandari, 2021). The enforcement of new tax regulations that aim to help business entities adapt to the conditions, as well as the impacts of the COVID-19 pandemic belong to the factors that encourage tax avoidance practices because the actors are going to take some advantage of loopholes inside of the new regulations, as well as incentives. There are many factors that influence tax avoidance, one of which is the sustainability report. A sustainability report (SR) is a report announced to the public that contains the economic, financial, social, and environmental performance of a financial services institution, issuer, and public company in running such a sustainable business. Sustainability reporting, as promoted by the standards of the Global Reporting Initiative (GRI), is an organization's practice of transparently reporting on its economic, environmental, and social impacts, and therefore also includes its positive or negative contribution to sustainable development goals.

A sustainability report, according to the World Business Council for Sustainable Development (WBCSD), is defined as a public report in which the company provides an overview of the company's position and activities on economic, environmental, and social aspects to its internal and external stakeholders. Thus, the SR ideally integrates the three previous reports (financial, social, and environmental). The SR in Indonesia has been practiced since 2000 and the GRI guidelines have been used as a reference for company reports. Corporate social responsibility (CSR) can also affect the company's tax avoidance because if the company carries out social responsibility, then the costs incurred are deductible expenses that can be reduced to income so the company has to pay less taxes. Research conducted by Istanti (2020) showed that sustainability reporting had an effect on tax avoidance. However, the opposite results were shown by the research conducted by Hapsari (2021) that inferred the sustainability report had no effect on tax avoidance.

The next factor that has the ability to influence tax avoidance is transfer pricing. Transfer pricing exists as an existing company's decision to determine transfer prices that happened to be by the prices of goods and services, during the same time that transactions that exist as applied by the company (Choi et al, 2020). Transfer pricing is the price of a product from a certain division that is given to other divisions (Hilton, 1987). Transfer pricing is the selling price that has been determined in the exchange between divisions to record sales revenue and costs from the division (Tippett & Wright, 2006). So, it could be inferred that transfer pricing is an existing company's decision to determine the price of the provision of goods, services, and assets, as well as financial transactions carried out between divisions inside of an existing company. There exist two transactions inside of transfer pricing, namely intra-company transfer pricing and inter-company transfer pricing. The intra-company transfer pricing is transfer pricing between parts of the one issuer. Meanwhile, inter-company transfer pricing is transfer pricing between two companies with a special relationship, where the transaction can be within one country or with various countries (Hilton, 1987).

Transfer pricing is the determination of transaction prices determined by related parties during the same time that management controls over transactions of goods, as well as services between members. Usually, the act of allocating profits that were by corporate entities inside of one country to corporate entities inside of other countries within the company group is also carried out with the aim of minimizing not avoiding taxes (Panjalusman et al., 2018). The first purpose of transfer pricing is to outsmart the amount of profit, so that tax payments and dividend distributions are low, and the second purpose is to inflate profits in order to window-dress financial statements (Panjalusman et al., 2018). This transfer pricing will be used as a way of tax avoidance by taking advantage of existing regulatory loopholes. So, transfer pricing is used in order to avoid taxes, but still maintain existing profits. Transfer pricing is also used by companies to minimize the amount of tax paid through price engineering that is transferred between divisions. So, it can be concluded that the higher the transfer pricing practice carried out by the company, the more likely the company is to minimize tax avoidance in the country (Panjalusman et al., 2018). This statement was supported by the research conducted by Lutfia (2018), which stated that transfer pricing had an effect on tax avoidance. However, the research done by Irawan et al. (2020) showed that transfer pricing had no effect on tax avoidance.

Another factor that can influence tax avoidance is deferred tax expense. Deferred tax in principle is the impact of income tax in the future caused by temporary differences (time) between accounting and taxation treatment, as well as tax losses that can still be compensated in the future (tax loss carry forward) that need to be presented in the financial statements at a certain period. The term "deferred tax" is an accounting term, not a tax term (Antonius & Tampunolon, 2019). Therefore, deferred tax cannot be used as an element to calculate tax obligations to the tax office. The tax office ignores the deferred tax liability of a taxpayer. Deferred tax is recorded to reflect the amount of tax payable in the financial statement position in a certain financial year or period, and is also calculated and reported in an asset or liability account in accordance with Statement of Financial Accounting Standards No. 46 (*Pernyataan Standar Akuntansi Keuangan* — PSAK). Based on research conducted by Anggraini et al. (2019), deferred tax expense had a positive significant effect on tax avoidance. Conversely, research conducted by Jati and Murwaningsari (2020) indicated that deferred tax expense had a negative effect on tax avoidance.

This research was conducted on multinational companies in the manufacturing sector listed on the Indonesia Stock Exchange (IDX) during the 2016–2020 period. The consideration of choosing the subject was because of the fact that in the case of the field, tax avoidance is mostly carried out by multinational companies. As in the case of three giant US technology companies, namely Google, Facebook, and Microsoft, they practice tax avoidance in developed and developing countries, one of which is Indonesia. Based on the description above, the purpose of this study is to examine the effect of sustainability reporting, transfer pricing, and deferred tax expense on tax avoidance.

Based on the description of the background and problems above, the identification of the problem is obtained as follows:

1. The high losses are borne by the state due to tax avoidance.
2. Lack of government firmness in dealing with tax avoidance.
3. There are inconsistencies (gap research) from previous studies.

Based on the description of the background and problems above, the formulation of the research questions of this study is as follows:

RQ1: What is the influence of sustainability reports on tax avoidance in manufacturing sector multinational companies listed on the IDX?

RQ2: What is the effect of transfer pricing on tax avoidance in manufacturing sector multinational companies listed on the IDX?

RQ3: What is the effect of deferred tax expense on tax avoidance in manufacturing sector multinational companies listed on the IDX?

This research has a limited scope, so it can be carried out in a more focused manner. The scope of this research is, namely:

1. Performed on multinational companies in the manufacturing sector that are listed on the IDX in the period 2016–2020.
2. The variables used in this study are sustainability reports (*X1*), transfer pricing (*X2*), and deferred tax expense (*X3*) as independent variables; and tax avoidance (*Y*) as the dependent variable.

Based on the description of the problem formulation above, the objectives of this study are as follows:

1. To determine the effect of sustainability reports on tax avoidance in manufacturing sector multinational companies listed on the IDX.
2. To determine the effect of transfer pricing on tax avoidance in manufacturing sector multinational companies listed on the IDX.
3. To determine the effect of deferred tax expense on tax avoidance in manufacturing sector multinational companies listed on the IDX.

This study uses a quantitative descriptive method. The quantitative descriptive method analyzes data in the form of numbers used to detect and describe existing phenomena, as well as to find relationships or influences between more than two variables in order to draw conclusions from research results (Sugiyono, 2017). The type of data used is secondary data, in the form of financial statements of multinational companies in the manufacturing sector for the period 2016–2020, which are listed on the IDX. This study used a purposive sampling method.

The contribution of this research lies in providing empirical evidence of the effect of sustainability reports, transfer pricing, and deferred tax expense on transfer pricing in multinational manufacturing sector companies.

The remaining structure of this study is as follows. Section 2 surveys the relevant literature. Section 3 describes the methodology employed to conduct the study. Section 4 presents the findings and Section 5 discusses the results. Section 6 provides the conclusions and suggestions.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Tax avoidance is an attempt to reduce taxes that are legal (lawful), while tax evasion is an attempt to reduce tax debts that are unlawful (Gaaya et al., 2019). Liana (2019) added that tax avoidance is an effort to minimize the tax burden that is often carried out by companies because it is still within the framework of the applicable tax regulations. Even though tax evasion is legal, the government still does not want it. According to Prastowo (2012), the phenomenon of tax avoidance in Indonesia can be seen from the tax ratio of the Indonesian state. The tax ratio shows the government's ability to collect tax revenue or absorb gross domestic product (GDP) back from society in the form of taxes.

Tax avoidance can be defined as an effort made by taxpayers with the aim of finding loopholes in the law regarding taxation in order to find weaknesses, so as to reduce the burden of taxation and pay lower amounts of the actual taxes. This tax avoidance is an effort to reduce tax obligations legally, which is done by looking for loopholes in tax assessments (Suandy, 2016). Examples that often occur are taking advantage of the provisions relating to exceptions and allowable deductions, using things that are not contained or listed in the regulations, and applying all weaknesses in the tax rules.

Tax evasion is an existing thing that is done by reducing the tax burden which is carried out by violating the regulations contained in the tax law. That is an example of giving funds that are not in accordance with the actual situation with the aim of hiding what really happened. This, of course, will enable to give the perpetrator a criminal sanction (Suandy, 2016). Therefore, the tax evasion act is said to be illegal because it is considered to have intentionally done so in order to avoid its obligation to pay taxes. Meanwhile, tax avoidance actions can be considered legal because they are in a scope that has complied with tax rules.

The taxpayers who practice tax avoidance are actually still following the provisions of the tax laws, but their interpretation of the law is not in accordance with the aims and objectives of the law or regulations (Erie Dharmawan et al., 2017). The usual way that is commonly used for companies to avoid tax is by moving their place of business or opening new business branches in remote locations. In this case, the taxpayers who run their businesses are able to move their place of business to other areas that have low tax rates, generally remote areas. For example, entrepreneurs are able to move their place of business to eastern Indonesia, an area that has a low tax rate. As for entrepreneurs who want to open new business branches, they can open new branches in areas that have low tax rates rather than in areas that have high tax rates. In this research, the measurement of the dependent variable of tax avoidance uses the cash effective tax rate (CETR) formula. CETR can be calculated by using a formula where tax payments are usually divided by profit before tax itself.

SR can be defined as a report to the public that includes the performance of a company. SRs are commonly referred to as triple-bottom-line reports, where companies are required to pay attention to the 3P (profit, people, planet) if they wish to achieve or gain sustainability, which includes profit, people, and planet (Kim & Im, 2017). In this case, apart from pursuing profit, the company also needs to be involved or engaged in fulfilling the welfare of the community (people) and contributing to preserving the environment (planet).

It is stated that sustainability reports can be a major concern in the context of non-financial reporting (Kim & Im, 2017). This kind of SR is one of the reports covering the relationship between the economic, environmental, and social impacts of the activities carried out on the company's operations every single day.

The implementation or the application of the SR itself in Indonesia has a legal basis, namely the Limited Liability Company (*Perseroan Terbatas* — PT) Law No. 40 of 2007. The implementation of the SR on social and environmental activities will be made according to the GRI. The National Center for Sustainability Reporting (NCSR) uses these guidelines, which is an independent institution whose task is to assess the disclosure of sustainability reports that companies submit periodically.

In this research, the measurement of the independent variable sustainability report employed the Sustainability Report Disclosure Index (SRDI) formula. The SRDI was calculated using a formula where the number of disclosure items made by the company was divided by the number of items that were expected to be disclosed by the company (Jarboui et al., 2020).

Transfer pricing is also often referred to as intra-company pricing, inter-company pricing, inter-divisional pricing, or internal pricing (Suandy, 2016). Projected transfer prices are defined as prices determined by multinational companies whose purpose is to kind of allocate revenue from one company to another company in different countries in a big way (Suandy, 2016). This is done so that multinational companies has the ability to minimize taxable profits inside of countries with high tax rates, as well as transfer their profits to other countries with lower tax rates.

The definition of transfer price is divided into two, namely an existing neutral understanding as well as an existing pejorative understanding. Neutrally, assuming that the transfer price is purely an existing business strategy, as well as a tactic without an existing tax burden reduction motive. While pejoratively, it assumes that transfer prices are an existing effort to save the tax burden by tactics, among others, by shifting profits to countries with lower tax rates (Suandy, 2016). According to Gunadi (1999, as cited in Suandy, 2016), transfer pricing is a strategy to manipulate prices in an existing structured way in order to minimize artificial profits, create the view that the company is losing money, as well as avoid an existing country's taxes. Based on this definition, tax avoidance is carried out using an existing transfer pricing scheme, which is carried out between domestic companies or companies located abroad. Transfer pricing is an attempt by an existing company to determine transfer prices of goods, services, intangible assets, or financial transactions by organizations (Refgia, 2017).

In this research, the measurement of the independent variable of transfer pricing uses an existing calculation formula where the total trade receivables to related parties are divided by the total trade receivables owned by the company (Panjalusman et al., 2018).

Deferred tax expense is an existing number of expenses on top of deferred tax that arise due to recognition of deferred tax liability or asset (Waluyo, 2014). Deferred tax expense is an expense that arises due to the difference between the profit contained in the financial statements (accounting profit), as well as the profit that is used at the same time that an existing guide in the tax calculation process (fiscal profit) (Febrian et al., 2018). Therefore, it can be concluded that deferred tax expense is an expense that arises because of the difference between the value of accounting profit and fiscal profit.

Deferred tax is a kind of the impact of future income tax which is caused by the time difference (temporary) between accounting and taxation treatment, as well as fiscal losses that can later be submitted for compensation in the future which is used in the financial statements for a period.

Deferred tax is not a kind of element in calculating tax obligations at the tax office. The tax office is not able to ignore the existence of deferred tax obligations from the taxpayers. This deferred tax is recorded with the objective of providing an overview of the amount of tax payable in the financial statement position for a period, and will later be calculated and reported in accordance with PSAK No. 46 rules.

In this research, in order to measure the independent variable of deferred tax expense, the formula, where the company's deferred tax expense in year t is divided by the company's total assets at the end of the year $t - 1$ is used (Harnanto, 2013).

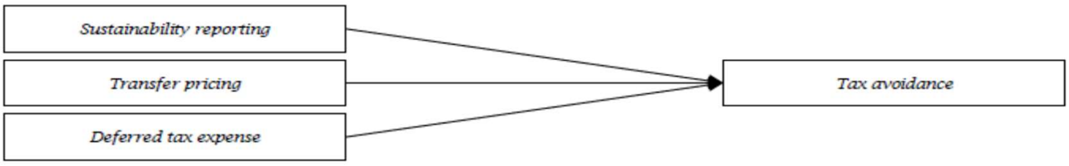
Based on the explanation above, the following hypotheses were developed:

H1: The sustainability report has a positive effect on tax avoidance.

H2: Transfer pricing has a positive effect on tax avoidance.

H3: Deferred tax expense has a positive effect on tax avoidance.

Figure 1. Theoretical framework



3. RESEARCH METHODOLOGY

3.1. Population and sample size

The population in this study were multinational companies in the manufacturing sector listed on the IDX in the 2016–2020 period, with as many as 130 companies. The sample was selected using a purposive sampling technique so that the number of samples per year was 35 companies. In this study, financial reports published by sampled companies during the 2016–2020 period will be the object of this research.

This sampling technique is usually based on certain considerations, for example, limited time, energy, and/or funds so that large and distant samples cannot be taken. The sample selection technique employed in this research is the purposive sampling technique. Purposive sampling is a kind of technique applied to determine or examine the sample with a non-random sampling method, where the researchers determine the sampling by setting criteria in accordance with the design, as well as research objectives. This was done by taking the subject not based on stratified, random, or regional, but based on a certain purpose. Purposive sampling is a sampling technique with certain considerations (Sugiyono, 2017).

The sampling criteria in this study are as follows:

1. Multinational companies in the manufacturing sector that have been listed on the IDX during 2016–2020, excluding companies engaged in finance, mining, and infrastructure, as well as companies whose entire income is subject to final income tax, because these companies are subject to different thin capitalization rules compared to other companies.
2. Companies that have a minimum profit of IDR10 billion. This is because companies that have a minimum profit of IDR10 billion often manipulate profits to carry out tax avoidance (Herdiyanto & Setiawan, 2015).
3. Companies that publish financial statements using the rupiah currency unit. Companies that publish financial statements not denominated in rupiah will be eliminated, the reason being that foreign currencies fluctuate over time and have different currencies.

3.2. Data collection method

The literature study method aimed to obtain data by reading, understanding, and studying articles, journals, books, and other literature related to the problems discussed in the scope of this research, so that the authors can obtain basic theoretical knowledge (Sugiyono, 2017). Library data is needed as support and guidance in conducting this research.

The documentation method is a method that is used to obtain/collect data and/or information and learn it from secondary data (in the form of books, archives, documents, written numbers, etc.) that can support research. This study employed secondary data in the form of financial reports of annually audited manufacturing sector multinational companies listed on the IDX in 2016–2020, obtained by downloading from the IDX official website: www.idx.co.id (Sugiyono, 2017).

3.3. Measurement of variables

This study uses a ratio scale to measure each independent and dependent variable. In this study, the variables used are *Tax avoidance*, *Sustainability reporting*, *Transfer pricing*, and *Deferred tax expense*. The measurement of each variable can be seen in the following table:

Table 1. Variable operationalization

No.	*Variable*	*Measurement*	*Source*	*Scale*
1.	*Tax avoidance*	$CETR = \frac{Taxes\ payment}{Profit\ before\ tax}$	Dyreng et al. (2008), Budiman and Miharjo (2012)	Ratio
2.	*Sustainability report*	$SRDI = \frac{N}{K}$	Wijayanti (2016)	Ratio
3.	*Transfer pricing*	$TP = \frac{Accounts\ receivable\ from\ related\ parties}{Total\ accounts\ receivable}$	Panjalusman et al. (2018)	Ratio
4.	*Deferred tax expense*	$BPT_{it} = \frac{DTE_{it}}{TA_{i,t-1}}$	Harnanto (2013)	Ratio

3.4. Analytical methods

This research applied multiple regression analysis using unbalanced panel data. Unbalanced panel data was applied in order to process data from time series observations, where cross-sectional units have an unequal number of time series observations. The software used in this analytical method was descriptive statistical analysis, panel data regression analysis, and hypotheses testing via the EViews version 10 program.

According to Falendro et al. (2018), descriptive statistical analysis is a kind of data analysis technique that provides an overview or general description of the sample data in the research as seen from the average (mean), standard deviation, maximum, and minimum values. Descriptive statistical analysis is intended to provide an overview of the distribution and behavior of the sample data used. The results of descriptive statistical analysis will definitely be useful as a tool or mean for analyzing data by describing the samples obtained without intending to make generally accepted conclusions, often called "generalizations".

A classical assumption test was employed to see or test a model that is eligible or not for use in this research (Sugiyono, 2017). Panel data regression is a regression technique that combines time series and cross-sectional data. Panel data regression has 3 (three) types of approaches, namely pooled least squared (PLS), fixed effects model (FEM), and random effects model (REM). To find out which approach is the best, this study will use the Chow test, Hausman test, and Lagrange multiplier test (Agung, 2013).

Hypotheses testing is a decision-making method based on data analysis by both controlled experiments and observations (uncontrolled). In statistics, a result is said to be statistically significant over the near-impossible probability that the event occurred due to chance, according to predetermined probability limits (Agung, 2013).

The robustness test or robustness test of the model can be determined as the ability to reproduce something under different conditions without causing undesirable differences in the final results obtained (Basu, 1997). The analytical parameter used to evaluate the interpretation of the data is the t-distribution. If the results of the robustness test show an existing significant t-value and are consistent with the results of the hypotheses test, then the modified Basu (1997) model used in this research is solid. The alternative methods that would be suitable for conducting the research are quantitative research with analytical tools in the form of Statistical Package for the Social Sciences (SPSS), EViews, or Stata.

4. RESULTS

Descriptive statistical analysis can be seen in Table 2, it can be inferred that the *Tax avoidance* (*Y*) variable has an average value of 0.217, which means that the company's ability to avoid tax is 21.7%. Variable *Y* has a standard deviation of 0.270, which means that the level of spread of variable *Y* is 27%.

Table 2. Descriptive statistics analysis

	Y	*X1*	*X2*	*X3*
Mean	0.216839	0.363077	0.724720	8.735111
Median	0.233416	0.340659	0.889506	0.002336
Maximum	1.805759	0.659341	3.966053	1193.259
Minimum	-1.300215	0.186813	0.000402	0.000000
Std. Dev.	0.269620	0.125981	0.444837	90.54962
Skewness	1.196110	0.514545	1.740425	12.90656
Kurtosis	19.41346	2.268191	17.61912	169.2689
Jarque-Bera	2006.114	11.62707	1646.713	206439.2
Probability	0.000000	0.002987	0.000000	0.000000
Sum	37.94683	63.53843	126.8260	1528.644
Sum of square deviations	12.64895	2.761596	34.43112	1426667
Observations	175	175	175	175

The lowest and highest values were -1.30 and 1.81, respectively, for PT. Modernland Realty Tbk (MDLN) companies in 2019 and PT. Impack Pratama Industri Tbk (IMPC) in 2017. Next, the *Sustainability reporting* (*X1*) variable showed an average value of 0.363, which means that the company reports a sustainability report of 36.3%. Variable *X1* has a standard deviation of 0.126, which means that the level of spread of variable *X1* is 12.6%. The lowest and highest values are 0.187 and 0.659, respectively, in PT. Surya Semesta Internusa Tbk (SSIA) and PT. Indofood Sukses Makmur Tbk (INDF). The *Transfer pricing* (*X2*) variable has an average value of 0.725, which means that the company carries out transfer pricing of 72.5%. Variable *X2* has a standard deviation value of 0.445, which means that the level of spread of variable *X2* is 44.5%. The lowest and highest values were 0.000402 and 3.966, respectively, for PT. Anabatic Technologies Tbk (ATIC) companies in 2016 and IMPC in 2017. The *Deferred tax expense* (*X3*) variable has an average value of 8.735, which means that the company has a deferred tax burden of 873.5%. Variable *X3* has a standard deviation value of 90.550, which means that the level of spread of variable *X3* is 9055%. The lowest and highest values were 0.000 and 1193.259, respectively, for PT. Ciputra Development Tbk (CTRA) companies in 2016, 2018, 2019, 2020, and MDLN in 2017.

4.1. Panel data regression estimation method determination test

Basuki and Prawoto (2016) pointed out that panel data regression is a regression technique that combines time-series data and cross-sectional data. Panel data regression has 3 (three) types of approaches, namely PLS, FEM, and REM. To find out which approach is the best, this research is going to use the Chow test, Hausman test, and the Lagrange multiplier test.

4.1.1. Chow test

The Chow test aims to compare and determine which model is the best the common effect model (CEM) or FEM approach to be used to perform panel data regression. The basis for decision-making or consideration in the Chow test is seen from the probability value of the Chi-square cross-section.

1. If the Chi-square cross-section probability value is > 0.05, then the approach chosen is the CEM.
2. If the probability value of the Chi-square cross-section is < 0.05, then the approach chosen is the FEM.

H_0: Common effect model (CEM).

H1: Fixed effects model (FEM).

In this case, if H_0 is rejected with the consequence of having to accept *H1*, then the test will continue with the Hausman test.

Table 3. Chow test result

Effects test	*Statistic*	*df*	*Prob.*
Cross-section F	1.344242	34.137	0.1202
Cross-section Chi-square	50.380348	34	0.0349

Based on the table that belongs to the Chow test results above, the probability value of the Chi-square cross-section is 0.0349 < 0.05, so the FEM is selected. Thus, it is necessary to carry out the Hausman test to compare and determine which model is the best: FEM or REM.

4.1.2. Hausman test

The Hausman test was done in order to compare and determine which model is the best: FEM or REM. The basis for decision-making in the Hausman test is seen from the random cross-section probability value (Widarjono, 2009).

1. If the random cross-section probability value is < 0.05, then the approach chosen is the FEM.
2. If the random cross-section probability value is > 0.05, then the approach chosen is the REM.

H_0: Fixed effects model (FEM).

H1: Random effects model (REM).

In this case, if H_0 is rejected with the consequence of having to accept *H1*, then the test will continue with the Lagrange multiplier test.

Table 4. Hausman test result

Test summary	*Chi-square statistic*	*Chi-square df*	*Prob.*
Random cross-section	8.387295	3	0.0387

Based on the Hausman test result above, the probability value of random cross-section is 0.0387 < 0.05, so the approach chosen is the FEM. Therefore, it is definitely not necessary to conduct the Lagrange multiplier test because the chosen approach is the FEM, in other words, the FEM is better than the CEM and the REM. In panel data analysis, classical assumption tests such as normality tests, multicollinearity tests, autocorrelation tests, and heteroscedasticity tests are not required.

4.2. Hypotheses testing

4.2.1. Multiple linear regression test

The regression data shows that the *Sustainability reporting* (*X1*) variable has a coefficient of -0.077134 and a probability of 0.9587, which means that the *Sustainability reporting* (*X1*) variable has no effect on the *Tax avoidance* (*Y*) variable. Meanwhile, the *Transfer pricing* (*X2*) variable has a coefficient of 0.168570 and a probability of 0.0027, which means that the *Transfer pricing* (*X2*) variable has a positive significant effect on the *Tax avoidance* (*Y*) variable. In addition, the *Deferred tax expense* (*X3*) variable has a coefficient of 0.000205 and a probability of 0.4101, which means that the *Deferred tax expense* (*X3*) variable has no effect on the *Tax avoidance* (*Y*) variable.

Table 5. The result of the multiple linear regression test

Variable	*Coefficient*	*Std. error*	*T-statistic*	*Prob.*
Constant	0.120885	0.541339	0.223307	0.8236
X1	-0.077134	1.486360	-0.051894	0.9587
X2	0.168570	0.055063	3.061431	0.0027
X3	0.000205	0.000248	0.826323	0.4101
Effects specification				
Cross-section fixed (Dummy variables)				
R-squared	0.290428	Mean dependent variable		0.216839
Adjusted R-squared	0.098792	S.D. dependent variable		0.269620
S.E. of regression	0.255956	Akaike info criterion		0.301857
Sum squared residual	8.975333	Schwarz criterion		0.989068
Log-likelihood	11.58752	Hannan-Quinn criterion		0.580609
F-statistic	1.515520	Durbin-Watson statistic		2.740170
Prob. (F-statistic)	0.045264			

4.2.2. T-test (Partial)

The function of the t-test is to test the average difference between two samples. There are two types of t-tests according to the nature of the sample being tested, namely: twin sample t-test and t-test for reobservation.

Table 6. The result of t-test (Partial)

Variable	*Coefficient*	*Std. error*	*T-statistic*	*Prob.*
Constant	0.120885	0.541339	0.223307	0.8236
X1	-0.077134	1.486360	-0.051894	0.9587
X2	0.168570	0.055063	3.061431	0.0027
X3	0.000205	0.000248	0.826323	0.4101

Based on the t-test results above, the *Sustainability reporting* (*X1*) variable has a coefficient of -0.077134 and a probability of 0.9587, which means that the *Sustainability reporting* (*X1*) variable has no effect on the *Tax avoidance* (*Y*) variable. So, it can be concluded that the first hypothesis (*H1*) in this study is rejected. The *Transfer pricing* (*X2*) variable has a coefficient of 0.168570 and a probability of 0.0027, which means that the *Transfer pricing* (*X2*) variable has a positive significant effect on the *Tax avoidance* (*Y*) variable. So, it can be concluded that the second hypothesis (*H2*) in this study is accepted. In addition, the *Deferred tax expense* (*X3*) variable has a coefficient of 0.000205 and a probability of 0.4101, which means that the *Deferred tax expense* (*X3*) variable has no effect on the *Tax avoidance* (*Y*) variable. So, it can be concluded that the third hypothesis (*H3*) in this study is rejected.

4.2.3. F-test (Simultaneous)

The F-test aims to find out whether the independent variables simultaneously affect the dependent variable. The F-test was carried out to see the effect of all the independent variables together on the dependent variable. The result of the F-test can be seen in Table 7, as follows:

Table 7. The result of F-test (Simultaneous)

F-test			
R-squared	0.290428	Mean dependent variable	0.216839
Adjusted R-squared	0.098792	S.D. dependent variable	0.269620
S.E. of regression	0.255956	Akaike info criterion	0.301857
Sum squared residual	8.975333	Schwarz criterion	0.989068
Log-likelihood	11.58752	Hannan-Quinn criterion	0.580609
F-statistic	1.515520	Durbin-Watson statistic	2.740170
Prob. (F-statistic)	0.045264		

Based on the F-test results above, the probability value of the F-statistic shows that the effect of the independent variable (*X*) on the dependent variable (*Y*) has a significance of 0.045264 with an F-statistic coefficient of 1.515520, which means that the independent variable (*X*) has a significant effect on the dependent variable (*Y*) simultaneously.

4.2.4. Coefficient of determination test

It is a value that shows how much the independent variable (exogenous) affects the dependent variable (endogenous). R-squared is a number that ranges from 0 to 1 which indicates the magnitude of the combination of independent variables that jointly affect the value of the dependent variable. The R-squared value is used to assess how much influence certain independent latent variables have on the dependent latent variable. The result of the coefficient of determination test can be seen in Table 8, as follows:

Table 8. The result of the coefficient of determination test

Determination test			
R-squared	0.290428	Mean dependent variable	0.216839
Adjusted R-squared	0.098792	S.D. dependent variable	0.269620
S.E. of regression	0.255956	Akaike info criterion	0.301857
Sum squared residual	8.975333	Schwarz criterion	0.989068
Log-likelihood	11.58752	Hannan-Quinn criterion	0.580609
F-statistic	1.515520	Durbin-Watson statistic	2.740170
Prob. (F-statistic)	0.045264		

According to the table above, the value of Adjusted R-squared is 0.098792. Thus, the variables *X1*, *X2*, and *X3* affect the *Y* variable only 9.9%, while 90.1% are influenced by other variables that are not in this regression.

4.3. Robustness test

Based on the robustness test results above, it shows the validity and robustness of the data used in this study. The results on the R-squared show the number 0.064099, thus the large proportion of the variation in the dependent variable explained by the independent variable is 6.4%. Judging from the Rw-squared value, the results show the number 0.154511 or 15.5%, thus the estimated variation of the independent variable to the dependent variable is 15.5%. The Akaike info criterion value shows the number 316.1514, which indicates that the data used in this study is not good, because the smaller the Akaike info criterion value, the better the data. Based on the deviance value or variance, if the value is close to 0 then the data is getting better. In this study, the deviance value is 2.541181, which indicates that the distribution or variance of the data is very good. Based on the probability value, it is found that the data has a number of 0.029289 < 0.05, so the data is getting better. From the grades of the S.D. dependent variable found that the value is 0.269620, with a decision if the data has a value of S.D. dependent variable close to 0 and less than 1 then the data is more homogeneous and more valid. The value of the residual sum of squares shows a value of 12.34807, with the conclusion that the smaller the value, the better the data used. Thus, the data used in this regression has good quality.

Table 9. Robustness test result

Variable	*Coefficient*	*Std. error*	*Z-statistic*	*Prob.*
Constant	0.144787	0.255484	0.566719	0.5709
X1	0.046108	0.087616	0.526252	0.5987
X2	0.007933	0.024022	0.330265	0.7412
X3	-0.000150	0.000115	-1.300638	0.1934
Robust statistics				
R-squared	0.064099	Adjusted R-squared		0.018995
Rw-squared	0.154511	Adjust Rw-squared		0.154511
Akaike info criterion	316.1514	Schwarz criterion		343.2970
Deviance	2.541181	Scale		0.092529
Rn-squared statistic	17.07981	Prob. (Rn-squared stat.)		0.029289
Non-robust statistics				
Mean dependent variable	0.216839	S.D. dependent variable		0.269620
S.E. of regression	0.272738	Sum squared residual		12.34807

5. DISCUSSION

5.1. Sustainability reporting has a positive effect on tax avoidance

Sustainability reports are a major concern in non-financial reporting (Manisa & Defung, 2017). The sustainability report is one of the reports that includes links between economic, environmental and social impacts on the activities carried out in the company's operations every day. Disclosure of activities related to social and environmental activities can in fact become an expense in profit/loss, so that its nature is a deductible expense that reduces taxable profits. That is, when there are many disclosure activities, costs will be allocated for it and more costs can be charged fiscally, thus contributing to efforts to save taxes.

In this study, the research subjects used were multinational companies in the manufacturing sector, where the company is an international scale company so it is necessary to maintain the company's reputation so that it is well maintained and even increased in the eyes of the public. Sustainability reports also encourage improved reporting and transparency in order to create broad public trust in companies, so that it can be concluded that companies that prioritize corporate image are less likely to practice tax evasion which can make the company's image/name worse.

Disclosure of high or low social activities, in fact, does not guarantee the level of tax avoidance practices. This is not the main determinant, especially when examined in terms of tax rules. It is true that social and environmental costs and those included in costs related to the company's business are permissible. However, apart from that, there are some social costs that cannot be paid for, namely those that are not included in the category of donations from Article 6 of Income Tax Law and which are not directly related to the interests of the company. In this case, of course, companies as taxpayers, as well as entities that wish to be socially and environmentally beneficial, naturally tend to choose not to discriminate between forms of assistance in their social and environmental activities. These behaviors are purely the awareness of the company on the basis of humanity to the welfare of stakeholders around the company. Thus, even social-environmental activities will not directly map the company's preferences, in relation to which assistance for social and environmental activities will receive fiscal loading facilities, or which will not receive fiscal charging facilities. Therefore, social environmental disclosure in this study will not affect tax avoidance, because it is purely from the sincerity of the company's social actions. The company in this case is more concerned with its useful role, not only as an entity for the benefit of its business but also for the good interests of the environment and society around it (Hapsari, 2021).

The results in this study are inversely proportional to stakeholder theory, where companies only have the responsibility to carry out all activities on the basis of the wishes of the owner, namely maximizing profits (Hamdani, 2016). If a company is required to carry out social responsibility on the part of the community, then this can be contrary to the wishes of the owner. Stakeholder theory states that a company not only has a responsibility to the owner of the company but also has a social responsibility that is carried out on the basis of the interests of the stakeholders. The practice of tax avoidance is carried out to minimize the tax paid, which is the desire of the owner to get the maximum profit. However, the results of this study are in line with the theory of legitimacy, because disclosure of social responsibility is carried out by companies to gain legitimacy from the community around the company, where this legitimacy causes companies to avoid unwanted things and can increase the value of the company. Legitimacy in the company is the direction of the implication of the orientation of corporate responsibility which focuses more on the stakeholder perspective (society in a broad sense). In other words, legitimacy theory states that organizations not only pay attention to the rights of investors but also pay attention to the rights of the public. The company is increasingly realizing that its survival also depends on the company's relationship with the surrounding community and environment. This is certainly in line with the legitimacy theory which states that companies have contracts with communities to carry out activities based on the values of justice, and how companies respond to various interest groups to legitimize corporate actions (Tilt, 1994).

5.2. Transfer pricing has a positive effect on tax avoidance

Transfer pricing is a systematic manipulation of prices with the aim of reducing artificial profits, making it appear as if the company is losing money, and avoiding taxes or duties in a country (Suandy, 2016). The tax apparatus wants transactions between companies that have special relations based on the principle of fairness, but on the contrary, there are still many companies that manipulate transfer prices for transaction activities between companies to be able to reduce tax payments (Azizah & Astariyani, 2020). Transfer price manipulation by companies aims to divert high tax rates from one country to another with a lower tax rate, so as to avoid paying taxes with large tax rates (Refgia, 2017). So, it can be concluded that with transfer pricing, when reporting taxes there will be reduced turnover, which is considered a form of tax evasion and will be subject to tax administration sanctions.

These results are in line with stakeholder theory, where theory describes which parties the company is responsible for (Freeman & McVea, 2001). Stakeholder theory can also be interpreted as a company that acts as an economic unit that has responsibility for doing everything regarding the interests of shareholders (Tandiontong, 2016). In a study conducted by Nurrahmi and Rahayu (2020), tests carried out simultaneously showed that transfer prices had an effect on tax avoidance and partially stated that transfer prices had an influence and a positive direction on tax avoidance in mining companies. Thus, transfer pricing can influence companies to carry out tax avoidance. The results of this study are in line with the results of a study by Lutfia and Pratomo (2018), which states that in the multinational sector, transfer prices affect tax avoidance. Nadhifah and Arif's (2020) research states that transfer pricing has a positive effect on tax avoidance in multinational companies in the basic industrial and chemical goods sectors, the consumer goods industry sector, and other industrial goods sectors. Research conducted by Putri and Mulyani (2020) states that transfer pricing has a positive effect on tax avoidance in multinational construction companies, and research conducted by Maulana et al. (2018) also states that transfer pricing has a significant effect on tax avoidance in mining companies.

5.3. Deferred tax burden has a positive effect on tax avoidance

Deferred tax expense is a number of deferred tax expenses that arise due to an acknowledgment of a deferred tax liability or asset (Waluyo, 2014). Deferred tax expense is an expense that arises due to the difference between the profit contained in the financial statements and the profit used in the tax calculation process (Febrian et al., 2018). It can be concluded that deferred tax expense is an expense that arises because of the difference between the value of accounting profit and taxable profit.

Deferred tax is principally the impact of income tax in the future caused by temporary (time) differences between accounting and taxation treatment, as well as tax losses that can still be compensated for in the future (tax loss carry forward) that need to be presented in the financial statements at a certain date, certain period. The term "deferred tax" is an accounting term, not a taxation term (Antonius & Tampubolon, 2019). Thus, deferred tax cannot be used as an element for calculating tax obligations to the tax office.

Based on PSAK No. 46, to allocate taxes at the beginning of the period, namely by reporting tax assets and liabilities on the balance sheet. Recognized tax assets and liabilities are due to temporary differences in the recognition of income and expenses. Temporary differences are differences in the tax base of assets or liabilities according to accounting and fiscal calculations. Temporary differences can cause an increase or decrease in assets and liabilities that will become a deferred tax expense and are reported in the current year's profit or loss together with the current tax in a separate presentation.

Accordingly, the temporary difference may increase the amount of future tax that will be recognized as a deferred tax payable, and the company must recognize it as a deferred tax expense. Conversely, temporary differences that reduce future tax amounts will be recognized as deferred tax assets, and companies must recognize the existence of deferred tax gains or benefits. Tax expense or tax income is the sum of the aggregate current and deferred tax expenses. In other words, the aggregate amount of current tax expense and deferred tax expense can be either tax expense or tax income. It can be concluded that the higher the company's deferred tax expense reporting as measured by inter-period tax allocation, the less likely the company is to take tax avoidance actions.

The results of this study are in line with research conducted by Suciarti et al. (2020) and Anarky et al. (2021), which shows the results that deferred tax expense has no effect on tax avoidance. Previous research that is not in line with this research is research conducted by Yunitasari et al. (2021), which shows that the variable deferred tax expense simultaneously influences tax avoidance. Another study conducted by Anggraini et al. (2019) shows that deferred tax expense has a significant effect on tax evasion. Research by Kalbuana et al. (2020) obtained the result that partially deferred tax expense has a significant positive effect on tax evasion. Another study by Suciarti et al. (2020) shows that deferred tax expense simultaneously has a significant effect on tax evasion.

6. CONCLUSION

Based on the results of the tests that have been carried out, the regression data shows that the Sustainability reporting variable has a coefficient of -0.077134 and a probability of 0.9587, so the Sustainability reporting variable has no effect on the Tax avoidance variable. Thus, it can be concluded that the first hypothesis of this study is rejected. In this study, the research subject was multinational companies in the manufacturing sector, where the companies are international, so it is necessary to maintain the company's reputation so that it is well maintained and even increased in the eyes of the public. Sustainability reports also encourage improvements in reporting and transparency in order to create public trust in companies, so it can be concluded that companies that prioritize corporate image are less likely to carry out tax avoidance practices and have the ability to carry out tax avoidance actions image/name belongs to bad company. Based on the results of the tests that have been carried out, the regression data shows that the Transfer pricing variable has a coefficient of 0.168570 and a probability of 0.0027 so the Transfer pricing variable has a positive significant effect on the Tax avoidance variable. From these results, it can be concluded that the second hypothesis in this study is accepted. With transfer pricing, when reporting taxes, there will be a reduced turnover, which is considered tax evasion and will be subject to tax administration sanctions. Based on the results of the tests that have been carried out, the regression data shows that the Deferred tax expense variable has a coefficient of 0.000205 and a probability of 0.4101, so that the Deferred tax expense variable has no effect on the Tax avoidance variable. From these results, it can be concluded that the third hypothesis in this study was rejected. The aggregate amount of current tax expense and deferred tax expense can be either tax expense or tax income. It can be concluded that the higher the reporting of the company's deferred tax burden as measured by the allocation of taxes between periods, the less likely the company is to take tax avoidance actions. Based on the results of the research that has been done, some suggestions are obtained:

1. It is recommended that future researchers add other variables, because, in this study, the sustainability reporting variable and deferred tax burden cannot affect tax avoidance. Suggested variables to be added, for example, financial leases, capital intensity, implementation of corporate governance, etc.

2. To the Government, especially the Directorate General of Taxes, because the results of this study indicate that the transfer pricing variable has a significant positive effect on tax avoidance, it is recommended to further tighten the supervision of transfer pricing carried out by companies (both intra-company and inter-company). This can greatly trigger the practice of tax avoidance. This way, the Government can obtain accurate information regarding tax avoidance practices carried out by companies through the transfer pricing scheme, so that they can impose strict sanctions on companies that carry out tax avoidance.

There are limitations to this study due to the time and the scope of the research conducted. Therefore, the limitations of this study are as follows:

1. Only 3 (three) independent variables are used, so that the relationship/influence between all the independent variables on the dependent variable is not too strong.

2. This research is limited to the observation year period, namely 2016–2020, so it cannot describe conditions outside of that period.

3. This research is limited to multinational companies in the manufacturing sector, so it cannot describe the condition of companies in other sectors.

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